

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

.80-39

317

A Summary of Current Program 7/1/65

p.2

and Preliminary Report of Progress

115

for 7/1/64 to 6/30/65

-

CONSUMER AND FOOD ECONOMICS

RESEARCH DIVISION

DEC 1 1965

of the

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

and related work of the

STATE AGRICULTURAL EXPERIMENT STATIONS

This progress report is primarily a tool for use of scientists and administrators in program coordination, development and evaluation; and for use of advisory committees in program review and development of recommendations for future research programs.

The summaries of progress on USDA and cooperative research include some tentative results that have not been tested sufficiently to justify general release. Such findings, when adequately confirmed, will be released promptly through established channels. Because of this, the report is not intended for publications and should not be referred to in literature citations. Copies are distributed only to members of Department staff, advisory committee members and others having a special interest in the development of public agricultural research programs.

This report also includes a list of publications reporting results of USDA and cooperative research issued between July 1, 1964, and June 30, 1965. Current agricultural research findings are also published in the monthly USDA publication, Agricultural Research. This progress report was compiled in the Consumer and Food Economics Research Division, Agricultural Research Service, U. S. Department of Agriculture, Washington, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

July 1, 1965



TABLE OF CONTENTS

	Page
Introduction.....	iii
Area No. 1: Food Consumption and Diet Appraisal.....	1
Area No. 2: Tables of Food Composition.....	7
Area No. 3: Family Economics and Rural Living.....	10

INTRODUCTION

Consumer and Food Economics Research is concerned with surveys of the kinds, amounts, and costs of food consumed by different population groups and the practices of families in the purchase and household use of various foods; the development of tables of the nutritive values of foods; nutritional appraisal of diets and food supplies; surveys of the kinds, amounts and costs of goods and services used for family living by rural households; special studies of clothing and household textile use by families; and studies of family practices in their management of financial and other resources. To facilitate improvement of the dietary situation, levels of living and home management practices, guidance materials are prepared such as food budgets, dietary guides, and other aids to help families make the most advantageous use of their money and time resources.

Research findings are disseminated to the scientific public through technical publications; to teachers, extension workers, and other leaders concerned with helping families and consumers, through semitechnical reports; and to consumers themselves, through popular-type publications. Two periodicals issued regularly by the Division help to disseminate research findings or current information of concern to the groups reached -- Nutrition Program News prepared for members of state nutrition committees and other workers in nutrition programs; and Family Economics Review, servicing extension agents, teachers, and other professional workers interested in family and food economics and home management.

Research results are interpreted for use in Rural Areas Development and other antipoverty programs by a senior staff member who is an active member of a wide variety of interagency, interdepartmental and professional groups

which are concerned with problems of low-income families and their solution. As chairman of an ad hoc working group on How Home Economics Can Contribute More Effectively to RAD, she was a major contributor to the publication "Home Economists and Rural Areas Development" issued jointly by Farmer's Home Administration, Federal Extension Service and Agricultural Research Service.

The program of the Consumer and Food Economics Research Division is carried out at Hyattsville, Maryland, and under contract and cooperative agreements with State Experiment Stations, universities and private research organizations. The scientific effort devoted to this research in Fiscal Year 1965 totaled 36.8 professional man-years at Hyattsville and the equivalent of 9.4 professional man-years in contract and cooperative agreements. The present report summarizes the current program of the Division and of the State Experiment Stations in the areas reported, and presents briefly the Division's progress toward the objectives of the Federal program during Fiscal Year 1965.

Two examples of recent progress in the Division's research program follow:

Incomes and expenditures of families on farms. Information on income, savings, and expenditures for family living by families classified by income level, family size, age of family head, education of family head, and other socioeconomic characteristics has been obtained from a nationwide survey of consumer expenditures, conducted cooperatively by USDA and the U. S. Bureau of Labor Statistics. CFE family economists report that in 1961 farm families spent, on the average, \$3,600 for current family living as compared with \$2,900 in 1955. When the change in price level is taken into account, the increase in real consumption is about one-eighth. In spite of this increase, farm families were still not spending as much as urban families. Their incomes in 1961 averaged only 74 percent of urban incomes and their spending for family living only 67 percent of that of urban families. They were able to save more than twice as much -- \$519 compared with \$219. Five statistical publications based on the survey, one for the U.S. and one for each of four geographic regions, and several analytical papers were released by CFE family economists. The papers summarize spending patterns of rural and urban families, of low-income families and of families over the life cycle.

Nationwide food consumption survey. A national survey of American eating habits designed to provide a wealth of data on food consumption patterns and nutrient levels of U.S. diets was initiated in April 1965. During the

spring skilled interviewers obtained information on the food used during the week preceding the interview from about 7,500 households. Information on the food intake of 13,000 individuals in those families was obtained at the same visit. In each of the three following seasons, 2,500 households are to provide data on their food consumption. The survey was designed to give results on household food consumption in the spring of 1965 that can be compared with those from the last nationwide survey made in the spring of 1955. Households were selected to yield representative samples of U.S. housekeeping families in each of the four seasons. Tabulation plans have been made to give data for four regions, separately for farm, rural nonfarm and urban families.

AREA NO. 1. FOOD CONSUMPTION AND DIET APPRAISAL

Problem. Information about food consumption and dietary levels is essential to effective consumer education in nutrition and food management, to market analyses, and to agricultural policy and program evaluations--both to provide the basis for such evaluations and to measure progress. Needed are periodic surveys of the kinds, amounts, and costs of food consumed by households and individuals in different population groups; surveys of practices of families in the purchase and use of specific foods; studies of factors affecting food choices; and nutritional appraisals of diets and food supplies. To facilitate improvement of the dietary situation, source materials such as food budgets and dietary guides based on advancing knowledge about food and nutrition should be developed for use in nutrition and consumer programs.

USDA AND COOPERATIVE PROGRAM

The Department has a continuing, long-term program involving nutritionists, food economists, and statisticians engaged in applied research in food consumption and diet appraisal. The research is conducted at Hyattsville, Maryland, and under contract and cooperative agreement with State Experiment Stations, universities, and private research organizations. The Division's scientific effort devoted to research in this area in Fiscal Year 1965 totaled 20.6 professional man-years at Hyattsville, and the equivalent of 9.4 professional man-years in contract research and cooperative agreements. Of the total effort, 22.3 man-years were devoted to food consumption and dietary levels, 1.0 to food management practices, 1.7 to nutritive value of national food supply, 1.9 to food plans and food budgets, and 3.0 to support for food and nutrition programs.

PROGRAM OF THE STATE EXPERIMENT STATIONS

The State program in food consumption and diet appraisal extends the nationwide studies of the Department to selected segments of the population or to smaller geographic areas. These two programs yielding information regarding consumption data are designed to serve complementary purposes. Currently sixteen States are contributing to the Experiment Station program. One continuing regional investigation is planned to yield information regarding food purchase and consumption patterns of families with preschool children. Such household units make up about one-fourth of the total in the North Central region where the study is being made. Food habits will be evaluated in terms of the child's dietary needs. This research will yield information of use to both consumer education and market interests. In the Western region an ongoing study of consumer response at the retail level to varying quality factors in selected fruits

and vegetables will be completed this year. A continuing consumer panel in a Southern metropolitan area is providing information on purchase patterns, including data on changes in form, amount, kind, expenditure, and nutritive value of foods purchased. Attempt is made to identify and quantify in a relative sense the factors effecting change.

The State program in this area totals 22.7 professional man-years.

PROGRESS--USDA AND COOPERATIVE PROGRAMS

A. Food consumption and dietary levels

1. 1965 nationwide survey. A nationwide survey designed to provide information on the food consumption and dietary levels of people in the United States is now underway. Data on the kinds and quantities of food used during one week were collected under contract from more than 7,500 representative U.S. households between April 7 and July 3. Similar data will be obtained from 2,500 households each in the summer and fall of 1965 and the winter of 1966. Information on the food eaten both at home and away from home during one day was provided by 13,000 individuals who were members of the families providing information on household food consumption during the spring of 1965. The study was designed to provide data for the four Census regions for farm, rural nonfarm, and urban populations for the year as a whole and for the four seasons.

Detailed tabulation plans have been drawn up that will provide for a series of volumes on the household data obtained in the spring of 1965 similar to those published for the 1955 survey. Other tabulation plans will provide information on (1) the 12-month period April 1965-March 1966 and for the four seasons, (2) the relationship between the money value of household food and its dietary adequacy, and (3) the intake of both food and nutrients of individuals by age and sex.

2. Effects of food distribution programs on diets of needy families.

Analyses of data from studies in Detroit, Michigan, and Fayette County, Pennsylvania, conducted to obtain information on the effectiveness of the Food Donation and Food Stamp Programs showed the following. (1) Many of the families participating in the Food Donation Program failed to participate in the Food Stamp Program when it replaced the Donation Program. The families who did participate in the Food Stamp Program were usually those of younger homemakers with more formal education, more young children, and lower incomes for family size. (2) Calcium and ascorbic acid were the nutrients which increased most when the Food Stamp Program replaced the Food Donation Program. They were also the nutrients in which diets were most limited (according to the National Research Council allowances) under both the Food Stamp Program and the Food Donation Program. (3) The overall quality of diets was better under the Food Stamp Program than under the Food Donation Program. (4) Under the Food Stamp Program participants

received coupons which would purchase food worth considerably more in money than the foods received under the Food Donation Program--approximately 135 percent more in Detroit and 65 percent more in rural Fayette County. They were also able to make their own selections.

A study of families participating in the Food Donation Program in Baltimore showed that little or no dietary improvement occurred when the number of donated foods was increased from five to eight. Families cut back on their food purchases, apparently using the funds thus made available for other needs.

3. Food consumption of the rural population in Spain (PL 480 Research). A 1964 survey of the food consumption of the rural population in Spain, conducted by the Spanish Ministry of Commerce under the cooperative sponsorship of the Economic Research Service and the Agricultural Research Service, using PL 480 funds, showed the percentage of income spent for food was much higher than in the U.S. However, the nutritive content of the diet was considerably lower than that of rural families of the U.S. For example, the average amount of calcium in the diet was about 0.5 g. per person per day compared to 1.2 g. in the diets of rural families in the U.S. in 1955. The percentage of calories from fat was 31 percent compared to 41 percent in the diets of rural families in the U.S. Although a wide variety of foods was used, a large share of the diet was supplied by bread, potatoes, dried beans, milk, olive oil, and wine. Tabulation of data from a second survey conducted in the early months of 1965 is in progress.

B. Food management practices

Household practices in home freezer management. Field work has been completed for the study of management practices of owners of home freezers. The information was obtained from 200 urban families in Fort Wayne, Indiana, and 200 farm families in the surrounding area. Plans made for tabulating the data will make it possible to describe for groups of families of homogeneous economic characteristics, the types of freezers owned, values attributed to freezer ownership, length of time foods are stored in freezers, and other freezer management practices.

A chapter containing research-based advice on storing frozen foods in the home was prepared for the 1965 Yearbook of Agriculture, Consumers All.

C. Nutritive value of national food supply

The revision of estimates of the food energy, protein, fat, carbohydrate, calcium, phosphorus, iron, vitamin A, thiamine, riboflavin, niacin, and ascorbic acid content of the per capita food supply from 1909 to the present has been completed. The revised figures incorporate newest estimates of per capita food consumption developed by the Economic Research Service, revised food composition data from Agriculture Handbook No. 8, and new information on the nutrients added to foods by enrichment and fortification

Tables showing the revised estimates for each year from 1909-1963 were published in Chapter 5 of Statistical Bulletin No. 364, "U. S. Food Consumption--Sources of Data and Trends," Economic Research Service, June 1965, with a description of the procedures used in developing the estimates. Tables showing the contribution of major food groups to the total supply of each nutrient for selected years are included.

The estimates for nutrients together with the per capita food quantities on which they are based are extremely useful in studying dietary trends. For example, in 1909-13, potatoes provided 31 percent of the total ascorbic acid in the food supply. In 1963, the total ascorbic acid in the food supply was about the same as in 1909-13 but with per capita potato consumption down to about one-half of the earlier level, potatoes contributed only about 20 percent of the total. Increased amounts of ascorbic acid from fruits offset the decreased contribution from potatoes. Similarly the total protein content of the per capita food supply has remained fairly stable in the last 50 years, but the share from animal products has increased during this period from about half to more than two-thirds of the total. Contributing to this shift are increasing consumption of beef and poultry and decreasing consumption of grain products.

D. Food plans and food budgets

Procedures for estimating the cost of the USDA food plans were completely revised as a result of the new series of retail food prices issued by the Bureau of Labor Statistics. Pricing forms were prepared for the use of the Division and of welfare and other agencies using the plans. Assistance in the pricing and use of the food plans in the setting of food allowances was given to several welfare agencies through personal conferences and correspondence. Information concerning the plans and their use was also disseminated through publication in Family Economics Review.

E. Support for food and nutrition programs

The compiling and interpreting of research-based information on nutrition for application to problems of food selection and food use is continuing. The information so developed serves as a basis for assistance to many groups both within and outside the Department. For example, technical advice and guidance were given during the year to the School Lunch Division, Consumer and Marketing Service, in revision of two publications designed to help improve the nutritional quality of school lunches. Also assistance was given to the Office of Economic Opportunity in the preparation of "Nutrition Guidelines" for the Project Head Start Centers Feeding Program.

Publication of Nutrition Program News and participation in the Interagency Committee on Nutrition Education, for which CFE furnishes the secretariat, are continuing as a means of coordinating and strengthening nutrition programs in general. A noteworthy accomplishment was the development by the Committee of four basic nutrition concepts to be used as guidelines for

program planning and curricular development in nutrition education. Topics featured in Nutrition Program News during the year in addition to these nutrition concepts were: Focus on Youth Fitness; Adapting Nutrition Facts--An Example; and Nutrition and the War on Poverty. Four chapters containing research-based information on food and nutrition for consumers were prepared for the 1965 Yearbook of Agriculture, Consumers All. Nutrition Science and You, prepared under cooperative agreement by Olaf Mickelsen of Michigan State University, was issued as No. 10 of the National Education Association's Vistas of Science series.

PUBLICATIONS--USDA AND COOPERATIVE PROGRAMS

Food Consumption and Dietary Levels

LeBovit, C., and Baker, D. 1965. Food Consumption and Dietary Levels of Older Households in Rochester, New York. Home Economics Research Report No. 25.

LeBovit, C. 1965. The Food of Older Persons Living at Home. Amer. Diet. Assoc. Jour. 46(4): 285-289.

Hendel, G. M., Burk, M. C., and Lund, L. A. 1965. Socioeconomic Factors Influence Children's Diets. Jour. Home Econ. 57(3): 205-208.

Hammill, A. E., and Burk, M. C. 1965. Children Influence Milk Consumption of Iowa Women. Jour. Home Econ. 57(1): 55-58.

Nutritive Value of National Food Supply

Friend, B., and Phipard, E. F. 1964. Nutritional Review. Natl. Food Sit. NFS-110. Outlook issue. Nov.

Friend, B., and Albright, T. M. 1965. Nutritive Value of Food Available for Consumption. Chapter 5 in U.S. Food Consumption--Sources of Data and Trends, 1909-63. Statistical Bull. No. 364.

Food Plans and Food Budgets

Peterkin, B., and Evans, B. 1965. Food Purchasing Guide for Group Feeding. Agriculture Handbook No. 284.

Peterkin, B. 1964. Family Food Plans, 1964. Family Economics Review. Oct., pp. 11-21, and Separate.

Peterkin, B. 1965. USDA Food Plans and Costs--Tools for Deriving Food Cost Standards for Use in Public Assistance. Family Economics Review. March, pp. 19-23.

Consumer and Food Economics Research Division. 1965. Sample Menus and Food List for One Week Based on USDA Economy Food Plan. CA 62-20. March.

Consumer and Food Economics Research Division. 1964. Cost of 1 Week's Food at Home. Family Economics Review. Oct., p. 21; Dec., pp. 27-28.

Consumer and Food Economics Research Division. 1965. Cost of 1 Week's Food at Home. Family Economics Review. March, pp. 21-22; June, p. 15.

Support for Food and Nutrition Programs

Hill, M. M. 1964. Focus on Youth Fitness. Nutrition Program News. July-Aug. 4 pp.

Hill, M. M. 1964. ICNE Formulates Some Basic Concepts in Nutrition. Nutrition Program News. Sept.-Oct. 4 pp.

Hill, M. M. 1964. Basic Nutrition Concepts--Their Use in Program Planning and Evaluation. Nutrition Program News. Nov.-Dec. 4 pp.

Hill, M. M. 1965. Adapting Nutrition Facts--An Example. Nutrition Program News. Jan.-April. 4 pp.

Hill, M. M. 1965. Nutrition and the War on Poverty. Nutrition Program News. May-June. 4 pp.

Hill, M. M. 1964. Teach Them to Think Right About Food. Grade Teacher Magazine. Sept.

Mickelsen, O. 1964. Nutrition Science and You. Vistas of Science, No. 10, National Science Teachers Association in cooperation with ARS, USDA. July.

Phipard, E. F., and Kirby, R. H. (ERS). 1964. Nutritional Status of the World, chapter in Farmer's World, 1964 Yearbook of Agriculture.

Page, L. 1964. "New Developments in Nutrition," paper presented at the Sixth Conference on College Teaching of Food and Nutrition, Southeast Section, North Atlantic Region, November, Cherry Hill, New Jersey, and abstracted in the report of the conference.

AREA NO. 2. TABLES OF FOOD COMPOSITION

Problem. Reliable values on the composition of foods are needed for appraisal of diets and food supplies, as background for many types of research in foods and nutrition, for developing materials to help in dietary planning and food selection, for use in production planning for this and other countries, for developing programs of food distribution, and as the basis for food and dietary standards in regulatory programs.

USDA AND COOPERATIVE PROGRAM

Continuous review and evaluation is made of the world's scientific and technical literature on the composition of foods--over 100 journals in addition to numerous special reports being reviewed by the staff assigned to this program. For nearly 75 years, tables of data for certain nutrients in foods have been published by the U. S. Department of Agriculture. Each new publication reflects advances both in food analyses and in knowledge of nutritional needs--nutrients being added to the tables as information on their presence in foods and on human requirements for them becomes available. Also reflected are advances in technology of preparing and marketing foods and in augmented facilities for fast transportation.

The Federal scientific effort devoted to work in this area conducted in Hyattsville in Fiscal Year 1965 totaled 8.5 professional man-years.

PROGRAM OF THE STATE EXPERIMENT STATIONS

The States report no research in this area.

PROGRESS--USDA AND COOPERATIVE PROGRAMS

B-vitamins and trace elements in foods. Compilation of data is well underway for the following B-vitamins--pantothenic acid, vitamin B₆ and vitamin B₁₂, and has been initiated for several trace elements. Data for these nutrients were not given in the 1963 revision of Agriculture Handbook No. 8 "Composition of Foods...raw, processed, prepared." Work has been hampered by scarcity of data and by inadequate descriptions of the foods that have been analyzed. Numerous problems have been encountered in the literature on the B-vitamins, one of which concerns the extraction procedures for releasing bound forms prior to determination of the amount of vitamin present. Special attention is being given to compiling data on cobalt, copper, manganese, molybdenum, selenium, and zinc but sources of data for other trace elements are being noted.

Nutritive values of retail and household units of food. A table is being developed which will give nutritive values for many of the foods in Handbook No. 8 in terms of market units of the items as usually purchased and in terms of household measures of prepared foods. A limited amount of such information included in the 1950 edition of the Handbook, as table 3, has been widely used in the conduct of dietary surveys, by the medical profession, by individuals in evaluating diets, and in textbooks on foods and nutrition. The data needed for the more comprehensive table proposed as a supplement for the 1963 edition of the Handbook are being obtained through consultation with representatives of industry and of Consumer and Marketing Service as well as through observation of products offered for sale. The development of the table is complicated by the fact that containers of a single commodity, such as a specific type soup, which appear to be the same size frequently differ widely in weight.

Procedures used in calculating nutritive values of home-prepared foods for Handbook No. 8. A manuscript describing the procedures used in calculating the composition of 250 home-prepared foods listed in Handbook No. 8 was completed and submitted to the Information Division for publication. This information will be especially useful to research dietitians who need to calculate the nutritive value of home-prepared foods that contain ingredients different in kind or proportion from those listed in the Handbook. A table is included which gives average adjustments for vitamin losses during cooking. It was developed from research-based information reported in the literature.

Proximate composition of beef, from carcass to cooked meat. A research report describing the procedure developed for obtaining the data on beef in Handbook No. 8 was completed and is scheduled for publication as Home Economics Research Report No. 31. It provides data on the physical and chemical (proximate) composition for (1) beef carcasses of six grades, prime, choice, good, standard, commercial, and utility; (2) retail cuts made from carcasses of the three most important grades with an ordinary amount of trimming; (3) retail cuts of the three grades completely trimmed of all separable fatty tissue; and (4) cooked meat prepared from these retail cuts. The details of the procedures for deriving the data on the composition of beef at each step with appropriate relationships among grades and among cuts within each grade are presented in this report.

Special Services. Research findings compiled from the world's literature on the nutritive value of foods continue to be in constant demand as background material for dealing with a wide variety of problems. During the reporting period, technical assistance was given in the formulation of a statement on nitrogen conversion factors for the Protein Committee of the Food and Agriculture Organization of the United Nations, in the development of policy and guidance for the Food for Peace Program, and in the development of educational materials on the so-called convenience foods for the use of dietitians in teaching diabetics. Assistance in the form of information on the composition of specific foods or groups of foods was also

given to research teams conducting dietary surveys, to welfare workers and to agencies of the Federal Government such as the Federal Trade Commission, the Food and Drug Administration, and the National Institutes of Health. Within USDA, information was provided for revising several of the tables in Statistical Bulletin No. 362, Conversion Factors and Weights and Measures for Agricultural Commodities and Their Products, which was issued in June 1965.

To assist in disseminating practical information based on the research in this area, two chapters were prepared for the 1965 Yearbook of Agriculture, Consumers All. The Human Nutrition Research Division cooperated in the preparation of one of them.

PUBLICATIONS--USDA AND COOPERATIVE PROGRAMS

Consumer and Food Economics Research Division. Revised 1964. Nutritive Value of Foods. Home and Garden Bull. No. 72.

Davenport, E., and Miller, D. F. 1964. Description of Punched Cards or Magnetic Tape Carrying Food Composition Values from Agriculture Handbook No. 8, Revised. Mimeographed. 15 pp.

Consumer and Food Economics Research Division. 1965. The Nutritive Value of Donated Foods. Family Economics Review. March.

AREA NO. 3. FAMILY ECONOMICS AND RURAL LIVING

Problem. Levels of living of rural families, often substantially lower than those of urban families, can be described in part by the quantities of goods and services families use for family living and the quality of housing they occupy. Periodic studies describing the situation and showing the adjustments families make to economic change in their use of money and other resources are needed to facilitate the development of programs to improve levels of living, especially in underdeveloped areas. Family living surveys and other types of family economic research provide background information for consumer education and family living outlook reports. Data on quantities of clothing and household textiles used and the frequency with which they are replaced are needed in development of budgets and in delineating those groups of items for which demand for agricultural fibers might be expanded.

USDA AND COOPERATIVE PROGRAM

The Department has a continuing long-term program involving family economists, home economists and statisticians who conduct basic studies of the expenditures of farm families for family living and of their home management practices. They also develop source materials for consumer education and information on the current family situation and outlook. Most of the research is carried out by Department staff at Hyattsville, Maryland. Small scale studies are usually conducted under cooperative arrangements or on contract. Other research is conducted cooperatively with other Federal agencies. For example, nationwide surveys of consumer expenditures are conducted cooperatively with the Bureau of Labor Statistics and, within the USDA, with the Statistical Reporting Service and Economic Research Service.

The Division's scientific effort devoted to research in this area in Fiscal Year 1965 totaled 7.7 professional man-years. Of this number 3.7 were devoted to rural family living studies; 0.5 to family financial management; 0.7 to clothing economics; and 2.8 to Family Economics Review and outlook reports.

PROGRAM OF STATE EXPERIMENT STATIONS

The States' research reported in this area is concerned with both economic and non-economic factors contributing to the quality of living. The research is concerned with family goals and levels of living and with consideration for local situations and needs. The research may focus on special segments of the population, such as the aging or young married couples, or may be directed toward the special family-related problems arising from rural adjustment needs. About seventeen States are contributing to this program.

Included are longitudinal studies of family expenditures, factors affecting decisions made relative thereto, and effects of decisions on the family's financial position. Expenditure patterns at different income and age levels are being analyzed, as well as specific management practices related to quality of living. Underlying all research in this area is a need for increased understanding of the factors contributing to the well-being of people. Some research evaluating the effects of mass media in consumer education programs is also included.

Other research is concerned with the role of the home and family in developing human resources, with special concern for the problems which rural adjustment brings to bear on the home. Educational and vocational goals of rural youth is one subject of study in the Southern States. Some work is concerned with the family's interest in community services and programs and with their needs in relation to such programs. There is also limited basic work on family decision making. Research reported here tends to focus on family living patterns, goals, adjustments, and the general well-being of our human resources.

The States' research reported in this area is 24.3 professional man-years in the economic phases and 37.2 professional man-years in other phases representing a total of 61.5 professional man-years.

PROGRESS--USDA AND COOPERATIVE PROGRAMS

A. Rural family living

1. Nationwide studies. Analysis and publication of the results of the 1961 nationwide survey of consumer expenditures, conducted jointly by USDA and the Bureau of Labor Statistics, continued throughout the reporting period. Wide variation was found between regions in the level of income of farm families and in the level of their expenditures. Of the four regions, the West was highest in both income (\$6,149) and expenditures (\$4,522); the South was lowest (income \$3,592; expenditures \$3,157). Farm families in the North Central and Western regions spent more for housing (including shelter, fuel and utilities, household operations, furnishings and equipment) than for food. In the other two regions, expenditures of farm families for housing were about equal to expenditures for food.

Expenditures of farm families for food increased less between 1955 and 1961 than did expenditures for most other categories of consumption. Consequently, as with rural nonfarm and urban families, there was a decrease in the percentage of the family budget spent for food. This decrease is accounted for by a lesser rise in food prices than in housing prices and by the rising level of living. Because of the decline in home production among farm families, the decrease in the proportion of income spent for food was less marked for them than for rural nonfarm and urban families.

Five publications issued in April give analytical highlights from the farm segment of the survey and present ten summary tables classifying income, expenditures and savings by characteristics of farm families such as income, family size, and age and occupation of the head of the family. Five publications, each containing 18 summary tabulations by pairs of family characteristics, as income and family size, are in press. Tabulation of data for five publications which will present the detail of income, expenditures and savings cross-classified by income after taxes and by family size are in process in the Washington Data Processing Center. The first ten publications reporting data for the rural nonfarm population and the first five for the total population (rural and urban) were issued by the Bureau of Labor Statistics. These publications combine data collected by USDA and BLS and carry both USDA and BLS publication numbers.

Data on consumer expenditures were presented in three papers at the 1964 Outlook Conference and in six charts in Handbook of Agricultural Charts 1964. Urban and rural nonfarm data, published by BLS, were also analyzed in Family Economics Review. A tabular presentation of data for farm families of two or more persons was prepared for publication in Historical Statistics of the United States, Continuation to 1962 and Revisions (U.S. Department of Commerce, p. 27), thus bringing the series on farm family expenditures in that publication up to date.

2. Area or special-purpose studies. Analysis of the job-related expenditures and management practices of gainfully employed wives in Gastonia, North Carolina, and three adjacent counties was completed. The yearly earnings of the wives, most of whom worked in textile mills, averaged about \$2,600. Direct job-related expenses such as social security and income taxes, transportation to work, food at work, special work clothing, and contributions at work took \$796 of the city wives' earnings and \$876 for the open-country wives. Clothing expenditures for both the city and country wives averaged \$110 more than for nonemployed wives. Extra for paid household services including child care was about \$170 for city wives and \$140 for country wives. The net incomes of working wives in families with small children averaged about one-half of their gross incomes. Working wives in families with school-age children only or with no children were able to net about three-fifths of their earnings. A report of this study is being prepared for publication. A report of a similar study in Ohio was published.

An investigation conducted in 1960-62 by the University of Illinois in cooperation with this Division and Divisions in the Economic Research Service was reported in the Journal of the American Statistical Association. The purpose of the study was to determine the completeness of reporting of assets and liabilities by farm families and to develop techniques to obtain more complete reporting. Information supplied by cooperating banks showed that farm operators refusing to take part in the survey or refusing to answer the questions concerned with financial holdings had larger than average holdings. Consequently, the usual practice of assigning

nonrespondents the average holding of their class resulted in an under-statement of the true level of financial holdings. Denial of the existence of bank accounts by respondents was responsible for a much smaller degree of error. On the average, accounts which were reported were reported accurately.

B. Family financial management

Home Economics Research Report No. 21, Helping Families Manage Their Finances, which was issued in June 1963, is being revised to incorporate more current examples from the recently completed nationwide survey of consumer expenditures. One of two publications for consumers--A Guide to Budgeting for the Young Couple was issued and another--A Guide to Budgeting for the Family--is in press. These two publications describe the decisions which are necessary for developing and maintaining workable budgets. Guidelines from surveys of expenditures and research on the use and cost of credit are incorporated. Five chapters prepared for the 1965 Yearbook of Agriculture present research-based advice for consumers on the employed wife's income, saving on cars, installment credit, medical bills, and the family budget.

C. Clothing economics

A tentative clothing plan was developed from data obtained from low-income rural families in East Texas. The plan which would cost \$211 annually at 1963 prices for a family of four is based on the pattern of actual practice and provides only for that proportion of the clothing inventory that is normally purchased. It was the subject of a paper presented at a regional meeting of college teachers of clothing and textiles. Alternative methodologies are now being investigated before clothing plans at two levels are constructed based on data obtained in the 1961 nationwide survey of consumer expenditures.

D. Family Economics Review and Outlook reports

Quarterly publication of Family Economics Review continued. The March 1964 issue was devoted to the problems of poverty. Its use at The American Home Economics Association Workshop, Working With Low-Income Families, and plans for its use in regional conferences have led to many requests for copies. A second printing has been made and a third will probably be necessary.

The Division had responsibility for the planning of four sessions on family living at the 1964 Annual Outlook Conference and contributed a section to the paper The Agricultural Outlook for 1965 presented in the general sessions. A survey of the uses made of the Outlook material by State Extension personnel indicates many applications to program planning and training of agents as well as in presentation of the Outlook in the States. Planning is underway for three sessions on family living at the 1965 Conference.

PUBLICATIONS--USDA AND COOPERATIVE PROGRAMS

Rural Family Living Studies

Nationwide Studies

United States Department of Agriculture and Bureau of Labor Statistics.
1964-1965.

Consumer Expenditures and Income, Summary Tabulations Classified by
Family Characteristics (tables 1-10).

Rural Farm Population, Northeastern Region, 1961. CES Report
No. 1. 23 pp.

Rural Farm Population, North Central Region, 1961. CES Report
No. 2. 23 pp.

Rural Farm Population, Southern Region, 1961. CES Report
No. 3. 23 pp.

Rural Farm Population, Western Region, 1961. CES Report
No. 4. 23 pp.

Rural Farm Population, United States, 1961. CES Report
No. 5. 23 pp.

Rural Nonfarm Areas in the Northeastern Region, 1961. CES Report
No. 6. 19 pp.

Rural Nonfarm Areas in the North Central Region, 1961. CES Report
No. 7. 19 pp.

Rural Nonfarm Areas in the Southern Region, 1961. CES Report
No. 8. 19 pp.

Rural Nonfarm Areas in the Western Region, 1961. CES Report
No. 9. 19 pp.

Rural Nonfarm Areas in the United States, 1961. CES Report
No. 10. 19 pp.

Total Northeastern Region, Urban and Rural, 1960-61. CES Report
No. 11. 41 pp.

Total North Central Region, Urban and Rural, 1960-61. CES Report
No. 12. 41 pp.

Total Southern Region, Urban and Rural, 1960-61. CES Report
No. 13. 41 pp.

Total Western Region, Urban and Rural, 1960-61. CES Report
No. 14. 41 pp.

Total United States, Urban and Rural, 1960-61. CES Report
No. 15. 41 pp.

Detail of Expenditures and Income (tables 29 and 30).

- Rural Nonfarm Areas in the Northeastern Region, 1961. CES Report No. 36. 165 pp.
- Rural Nonfarm Areas in the North Central Region, 1961. CES Report No. 37. 165 pp.
- Rural Nonfarm Areas in the Southern Region, 1961. CES Report No. 38. 165 pp.
- Rural Nonfarm Areas in the Western Region, 1961. CES Report No. 39. 165 pp.
- Rural Nonfarm Areas in the United States, 1961. CES Report No. 40. 165 pp.

Clark, F. 1964. "What New Research Reveals About Consumer Spending," paper presented at Extension Service Home Management and Family Economics Workshop, Chicago, October, processed, 9 pp.

Ellis, M. J. 1964. "Spending Patterns Over the Life Cycle," paper presented at 42nd Outlook Conference, processed, 13 pp.

Holmes, E. G. 1964. "Spending Patterns of Low-Income Families," paper presented at 42nd Outlook Conference, processed, 10 pp. Reprinted in Adult Leadership, 14(1): 16-18, 33-34 (1965); condensed in Family Economics Review, March, pp. 6-12 (1965).

Pennock, J. L. 1964. "Spending Patterns of Rural and Urban Families," paper presented at 42nd Outlook Conference, processed, 20 pp. Excerpt in Family Economics Review, March, pp. 23-25 (1965).

Pennock, J. L. 1965. Regional Differences in Income, Savings, and Expenditures of Farm Families. Family Economics Review, June, pp. 3-4.

Area or Special-Purpose Studies

Ferber, R. 1965. The Reliability of Consumer Surveys of Financial Holdings: Time Deposits. Jour. Amer. Statis. Assoc. 60(309): 148-163.

Holmes, E. G. 1965. Job-Related Expenditures and Management Practices of Gainfully Employed Wives in Ohio. Home Economics Research Report No. 27. 39 pp.

Pennock, J. L. 1964. Rural Family Spending and Consumption in a Low-Income Area in Kentucky. Home Economics Research Report No. 26. 101 pp.

Family Financial Management

A Guide to Budgeting for the Young Couple. Home and Garden Bull. No. 98. 1964. 16 pp.

Clothing Economics

Britton, V. 1965. Toward the Development of Clothing Budgets: A Tentative Low-Cost Plan for the Rural South, in Proc. of 20th Conf. of Col. Teachers of Textiles and Clothing, Central Region, Chicago, Illinois, October 28-31, 1964. pp. 49-59.

Family Economics Review and Outlook Reports

(Three papers for 42nd Outlook Conference, listed above.)

Britton, V. 1964. "Clothing and Textiles: Supplies and Prices," paper presented at 42nd Outlook Conference, processed, 10 pp.

Consumer and Food Economics Research Division. 1964-65. Four issues of Family Economics Review, ARS 62-5. Oct. 1964, 23 pp.; Dec. 1964, 28 pp.; March 1965, 28 pp.; June 1965, 16 pp. Signed articles by staff of Family Economics Branch (omitting items listed above) were:

Pennock, J. L. 1964. The Stability of Family Spending in the Face of Income Change. Oct., pp. 6-7.

Mork, L. F. 1964. Laundering Costs: Home vs. Self-Service. Oct., pp. 8-9.

Pennock, J. L. 1965. Who are the Poor? March, pp. 3-6.

Holmes, E. G. 1965. Installment Debt of Low-Income Families. March, pp. 14-15.

Ellis, M. J. 1965. Housing of Low-Income Families. March, pp. 16-18.

Garrison, M. L. 1965. College Education on Borrowed Money. June, pp. 10-11.

Rural Areas Development

Wolgamot, I. H. 1965. What Home Economists Are Doing for Low-Income Families. What's New in Home Economics. March. 29(3): 32, 44 ff.

Wolgamot, I. H. 1965. "Consumers and Their Problems," paper presented at 62nd Annual Convention of the Assoc. of the Southern Agricultural Workers, Dallas, Texas. Abstract in Proceedings of Convention. pp. 151-152.

Wolgamot, I. H. 1965. "The Dietitian and Rural Community Development," paper presented at M-I-N-K Regional Conference of Dietetic Assoc. of Missouri, Iowa, Nebraska, and Kansas. May, processed, 7 pp.

Line Project Check List -- Reporting Year July 1, 1964 to June 30, 1965

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Incl. in	
			Summary of Progress (Yes-No)	Area and Subheading
CFE 1	Food consumption and dietary levels.	Hyattsville, Md.	No	--
CFE 1-6	Analysis and interpretation of data on household food consumption and dietary levels.	Hyattsville, Md.	No	--
CFE 1-7	Food consumption of individuals related to economic and social factors.	Hyattsville, Md.	No	--
CFE 1-8(c)	Household practices in homefreezer management.	Hyattsville, Md. Philadelphia, Pa.	Yes	1B
CFE 1-9(c)	Use and discard of food in households.	Hyattsville, Md.	No	--
CFE 1-10	Effects of food distribution programs on diets of needy families.	Hyattsville, Md.	Yes	1A2
CFE 1-11(C)	Nationwide survey of household food consumption 1965.	Philadelphia, Pa. Hyattsville, Md.	Yes	1A1
CFE 1-12(C)	Nationwide survey of food intake of individuals, Spring 1965.	Philadelphia, Pa. Hyattsville, Md.	Yes	1A1
PL 480 E 25-ERS-1(k)	Food consumption in relation to family income in the rural population of Spain.	Madrid and rural areas of Spain	Yes	1A3
CFE 2	Appraisal of foods and diets for human nutrition.			
CFE 2-1	Development of basic information for food and nutrition programs.	Hyattsville, Md.	Yes	1E
CFE 2-5	Nutritive content of the U.S. per capita food supply, 1909 to present.	Hyattsville, Md.	Yes	1C
CFE 2-6	Food budgets.	Hyattsville, Md.	Yes	1D
CFE 2-8	Tables of trace elements and sulfur in foods.	Hyattsville, Md.	Yes	2
CFE 2-9	Tables of selected B-vitamins in food--folic acid, pantothenic acid, vitamins B-6 and B-12.	Hyattsville, Md.	Yes	2
CFE 2-10	Compilation of data on the composition and nutritive value of foods.	Hyattsville, Md.	Yes	2
CFE 0-0-1	Composition of foods used by the Armed Forces.	Hyattsville, Md.	No	--
CFE 3	Rural family expenditures and household management.			
CFE 3-1(Rev.)	Development of family living and outlook reports.	Hyattsville, Md.	Yes	3D
CFE 3-3(C) 1/	Family expenditures and home management practices related to the gainful employment of wives.	Hyattsville, Md.	Yes	3A2
CFE 3-5(Rev.)	Rural family living in selected areas in Texas.	Hyattsville, Md.	No	--
CFE 3-6 2/	Survey methods for obtaining data on farm family income, savings, assets and debts.	Urbana, Ill. and Hyattsville, Md.	Yes	3A2
CFE 3-7	Rural family spending patterns in 1961.	Hyattsville, Md.	Yes	3A1
CFE 3-9	Development of clothing budgets.	Hyattsville, Md.	Yes	3C
CFE 3-10	Use of time by homemakers.	Hyattsville, Md.	No	--
HHE 3-6 3/	Rural family living in selected under-developed counties in Kentucky.	--	No	--

1/ Discontinued March 1963

2/ Discontinued July 1963

3/ Discontinued April 1961

